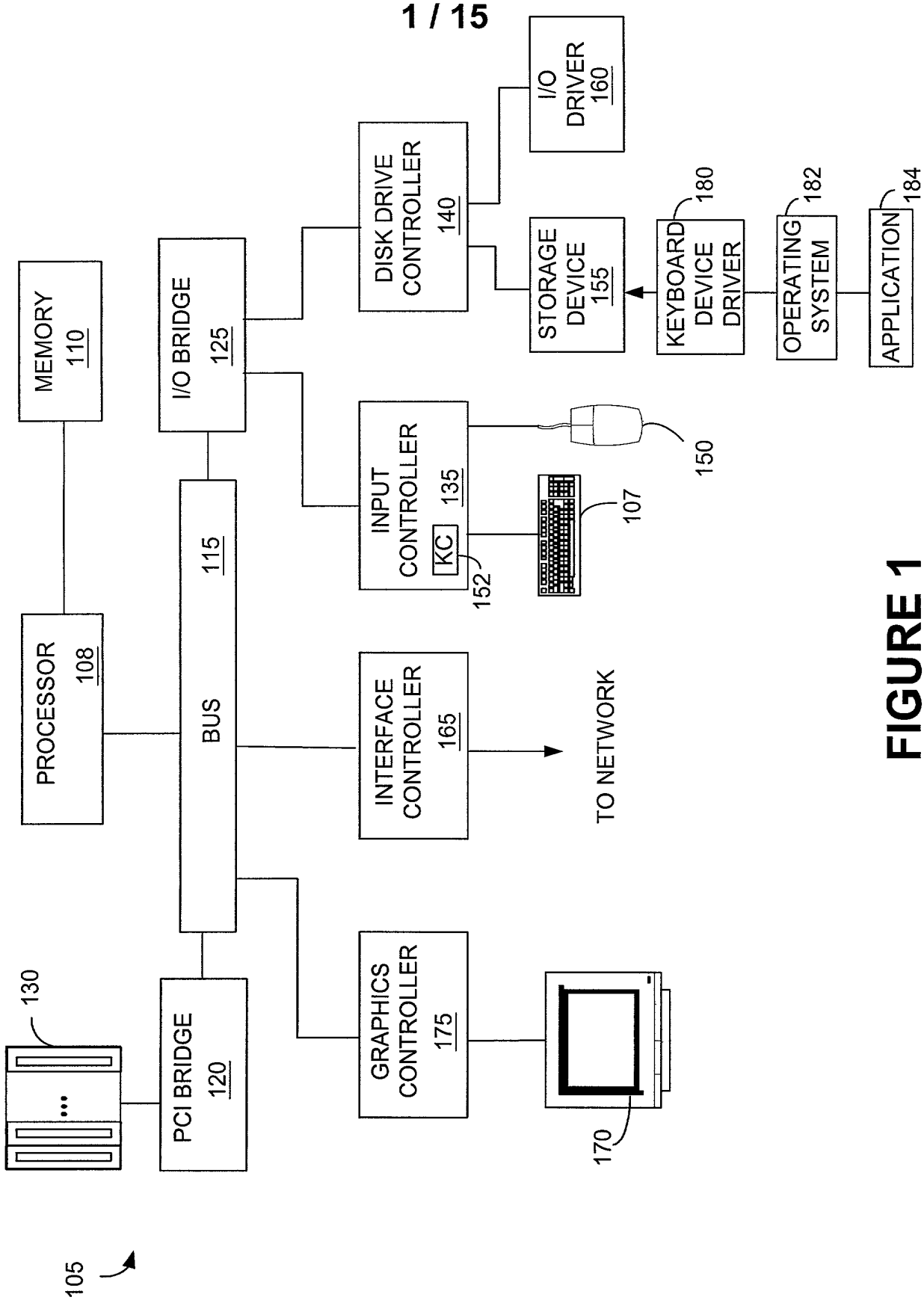
105
130
PCI BRIDGE 120
PROCESSOR 108
MEMORY 110
BUS 115
I/O BRIDGE 125
GRAPHICS CONTROLLER 175
170
INTERFACE CONTROLLER 165
TO NETWORK
INPUT CONTROLLER 135
KC
152
107
150
DISK DRIVE CONTROLLER 140
I/O DRIVER 160
STORAGE DEVICE 155
KEYBOARD DEVICE DRIVER
180
OPERATING SYSTEM
182
APPLICATION
184

FIGURE 1

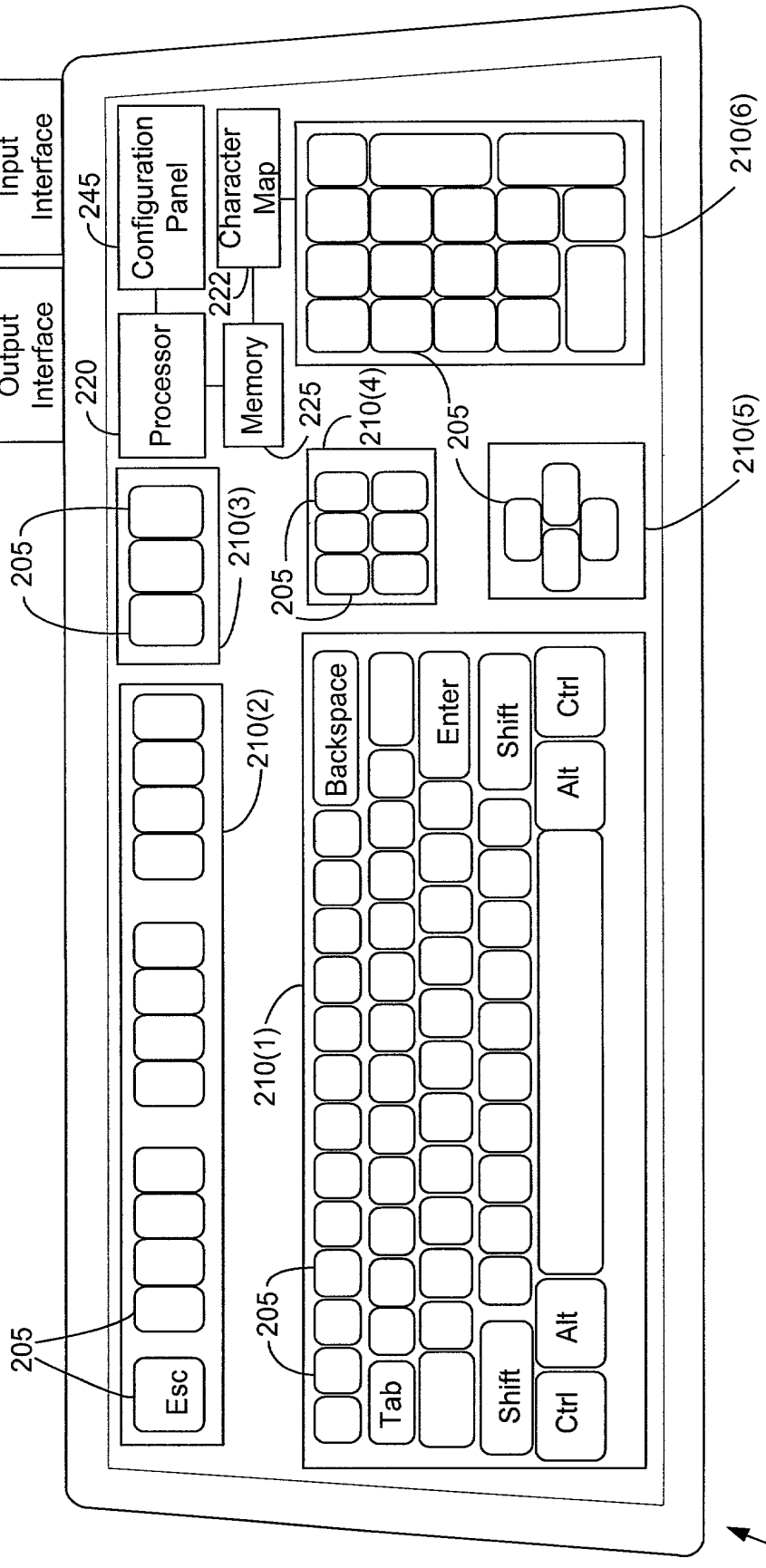
240
Output Interface
242
Input Interface
220
Processor
245
Configuration Panel
222
Character Map
Memory
225
205
210(1)
210(2)
210(3)
210(4)
210(5)
210(6)
Esc
Tab
Backspace
Enter
Shift
Ctrl
Alt
107

FIGURE 2

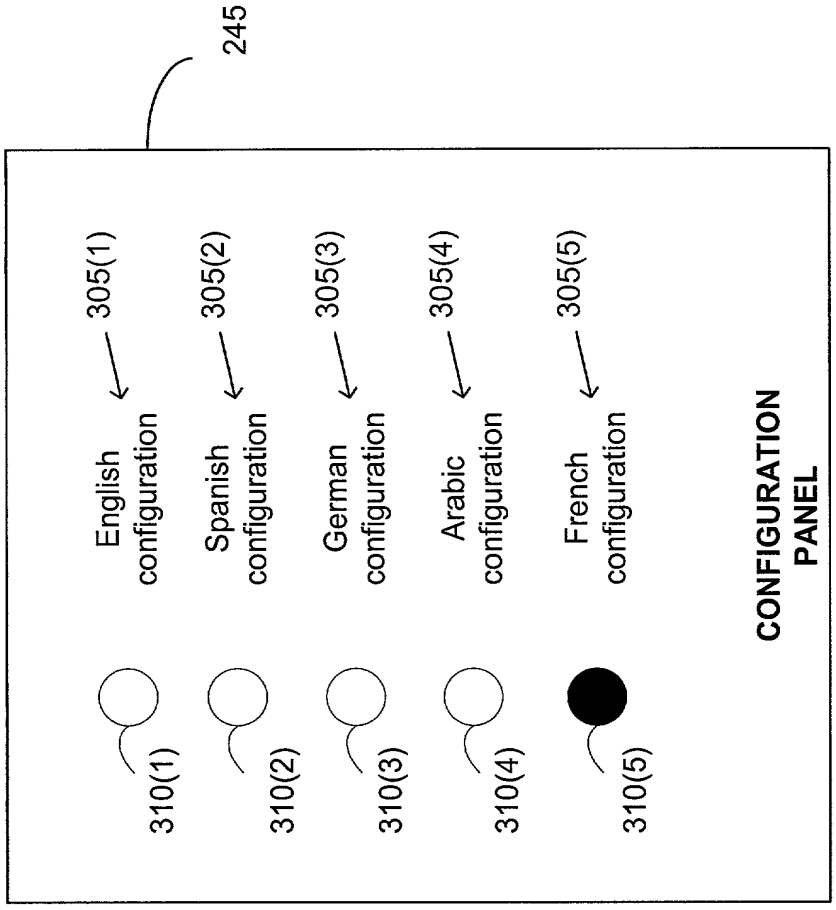

FIGURE 3A

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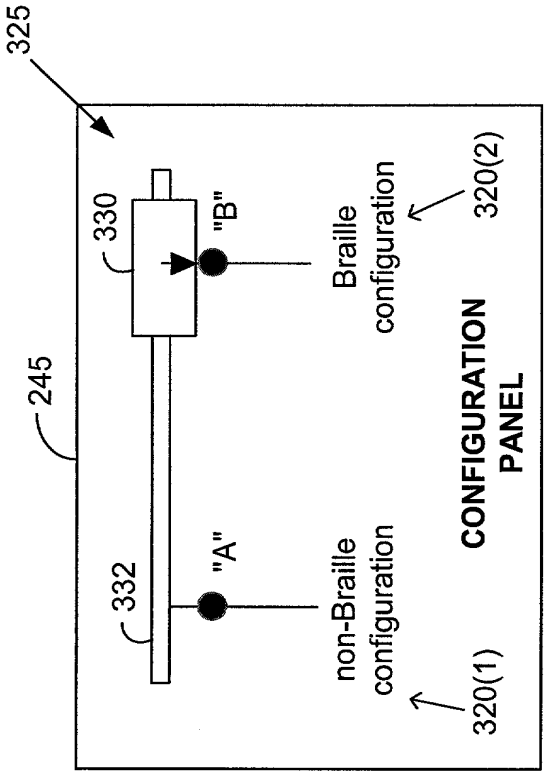

FIGURE 3B

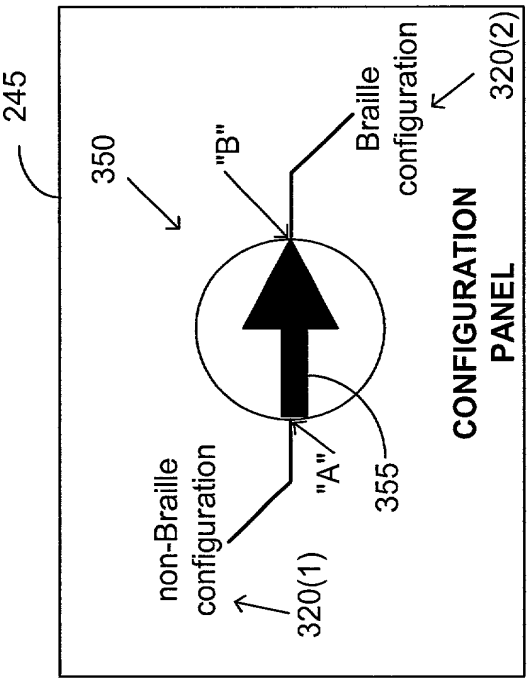

FIGURE 3C

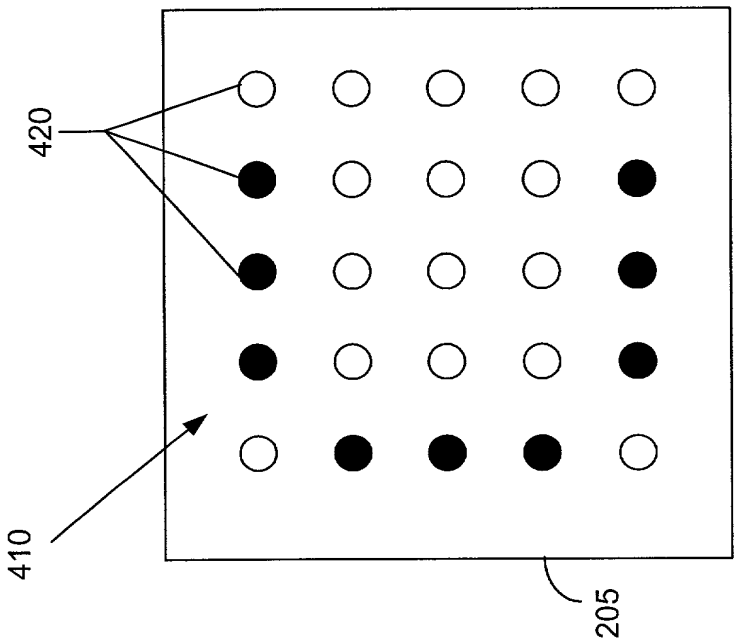

FIGURE 4B

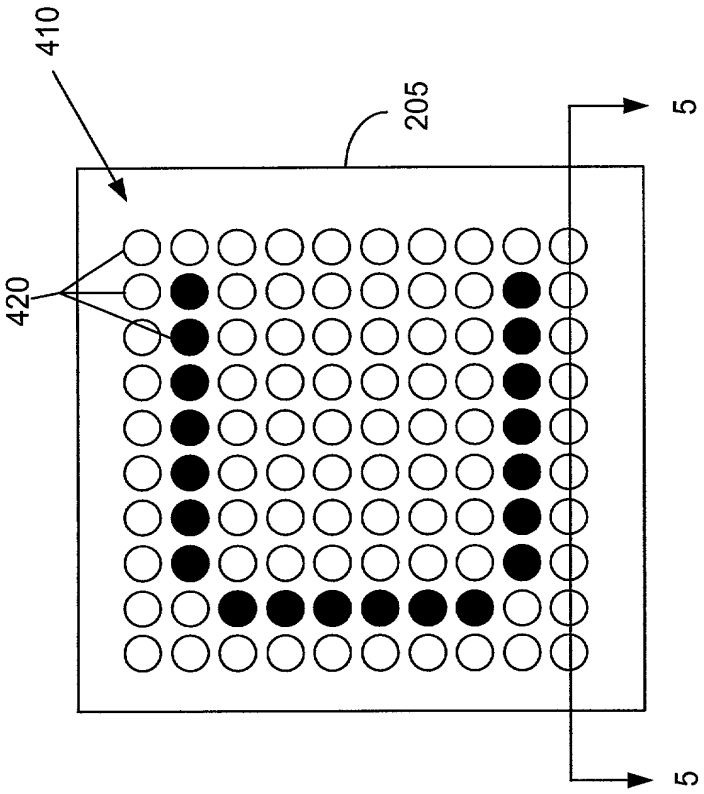

FIGURE 4A

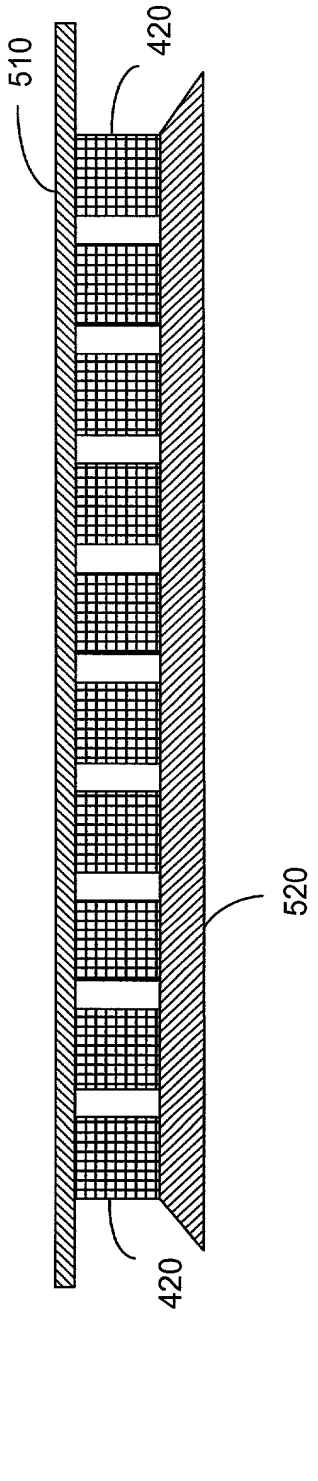

FIGURE 5

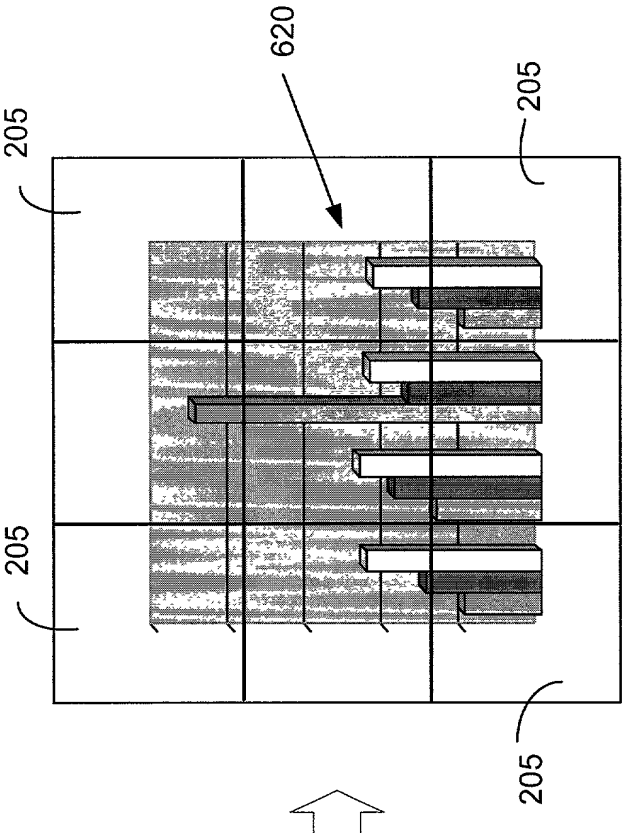

FIGURE 6B

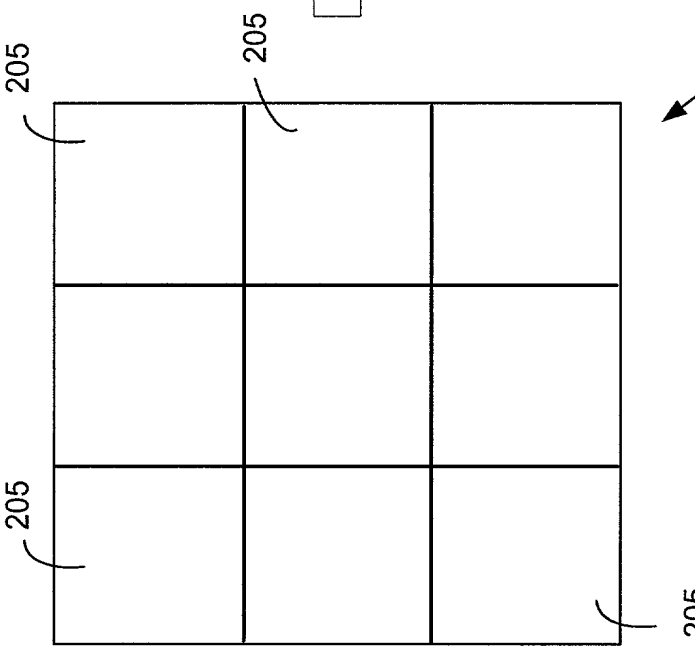

FIGURE 6A

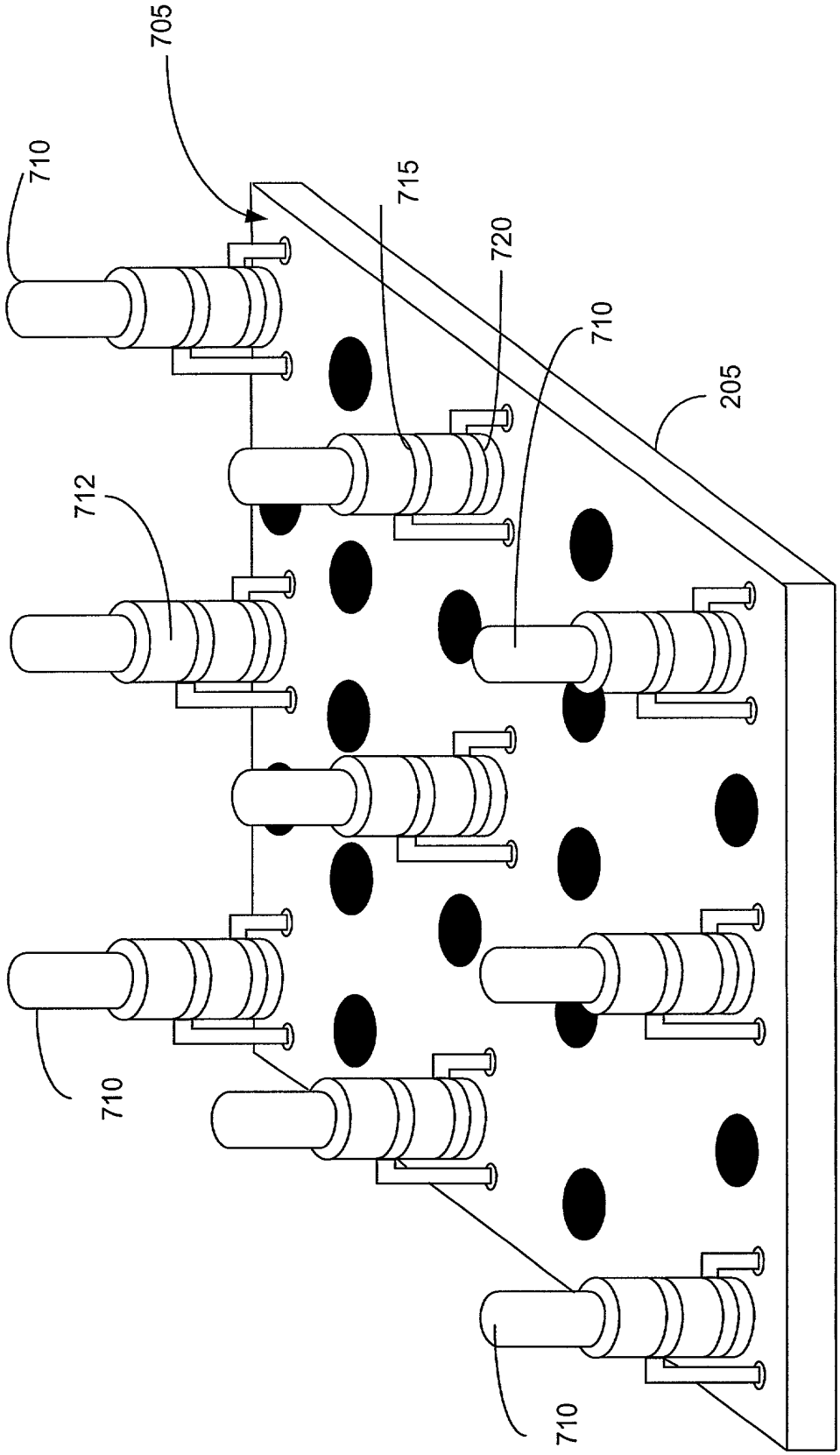

FIGURE 7

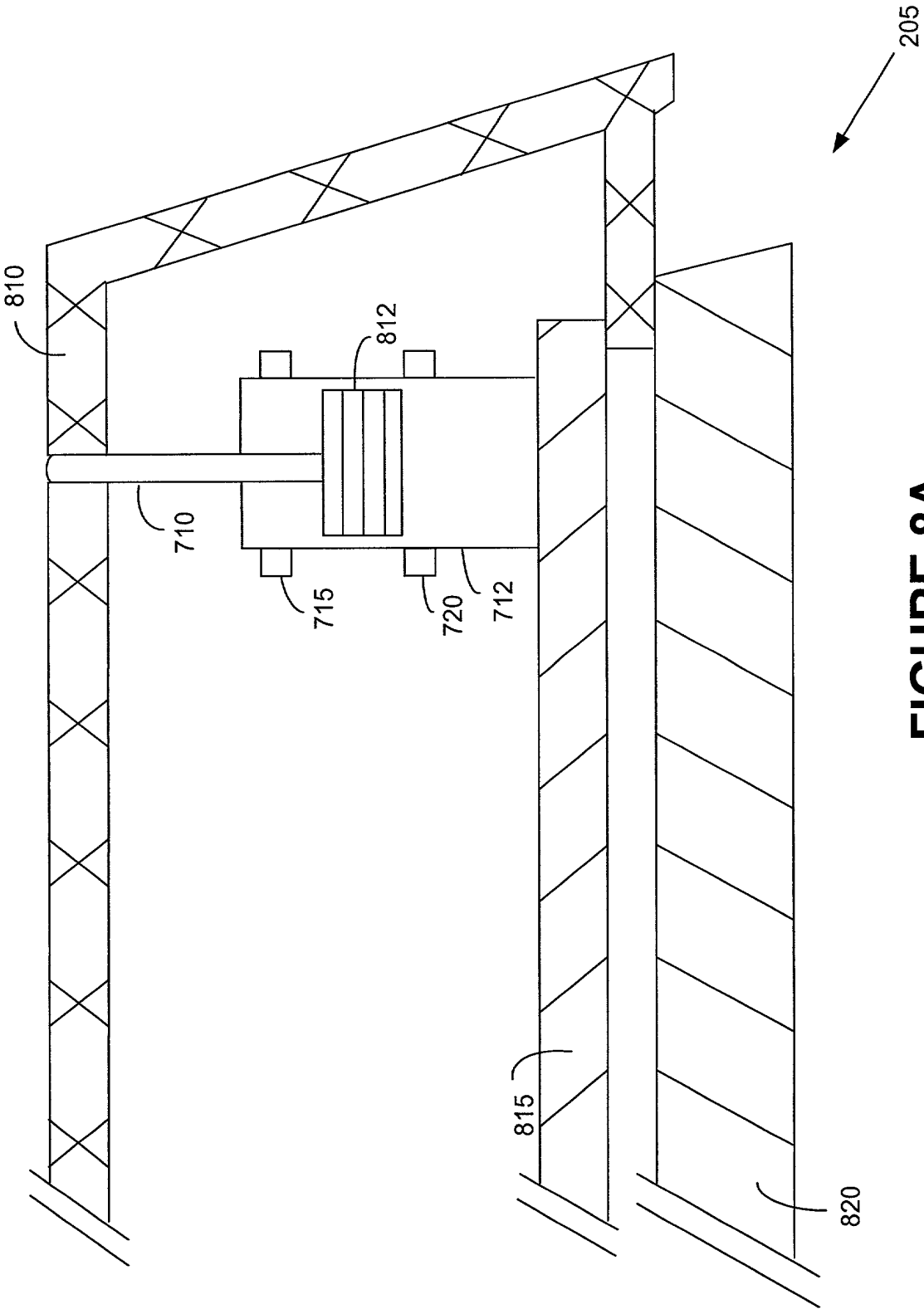

FIGURE 8A

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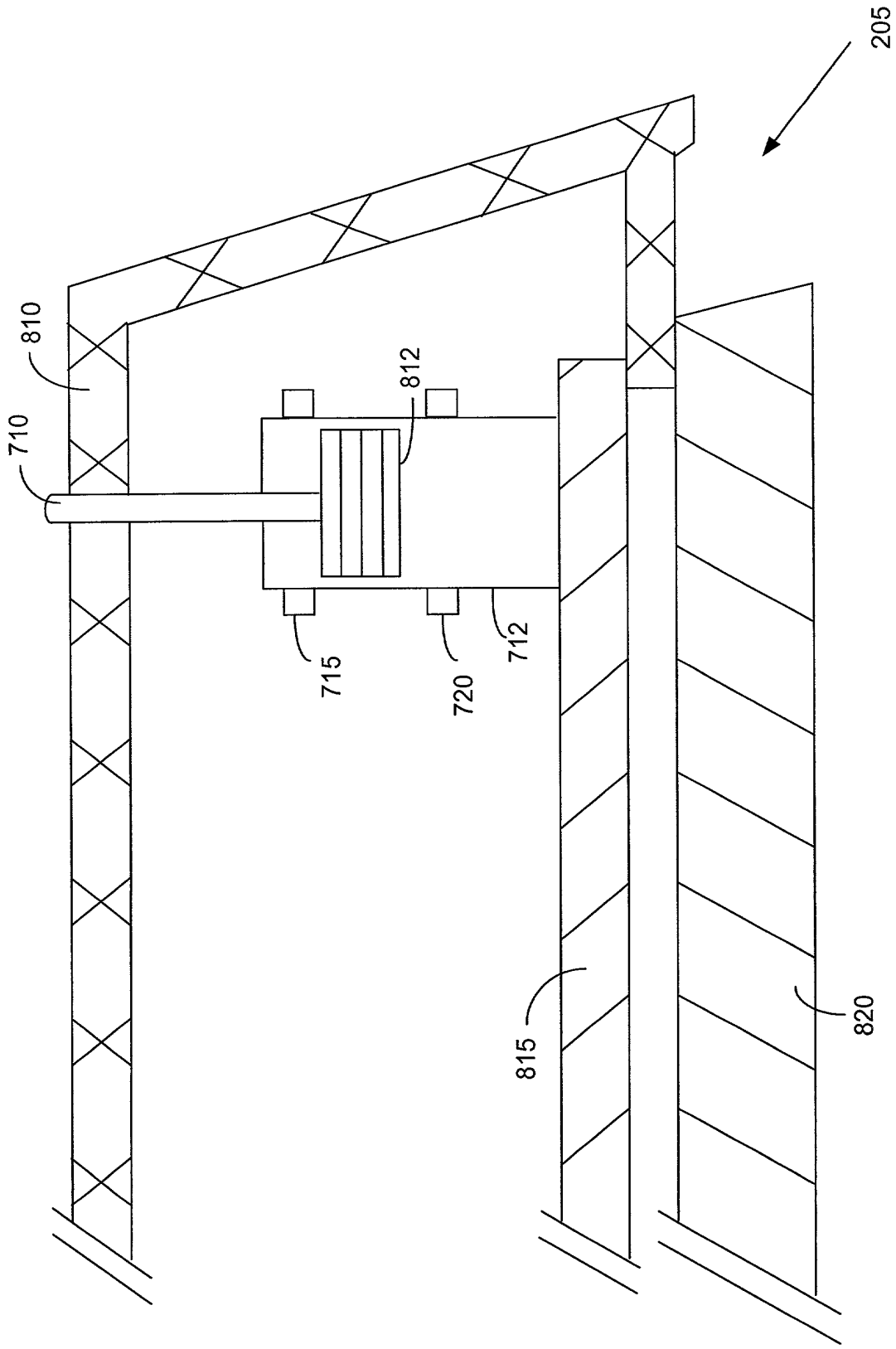

FIGURE 8B

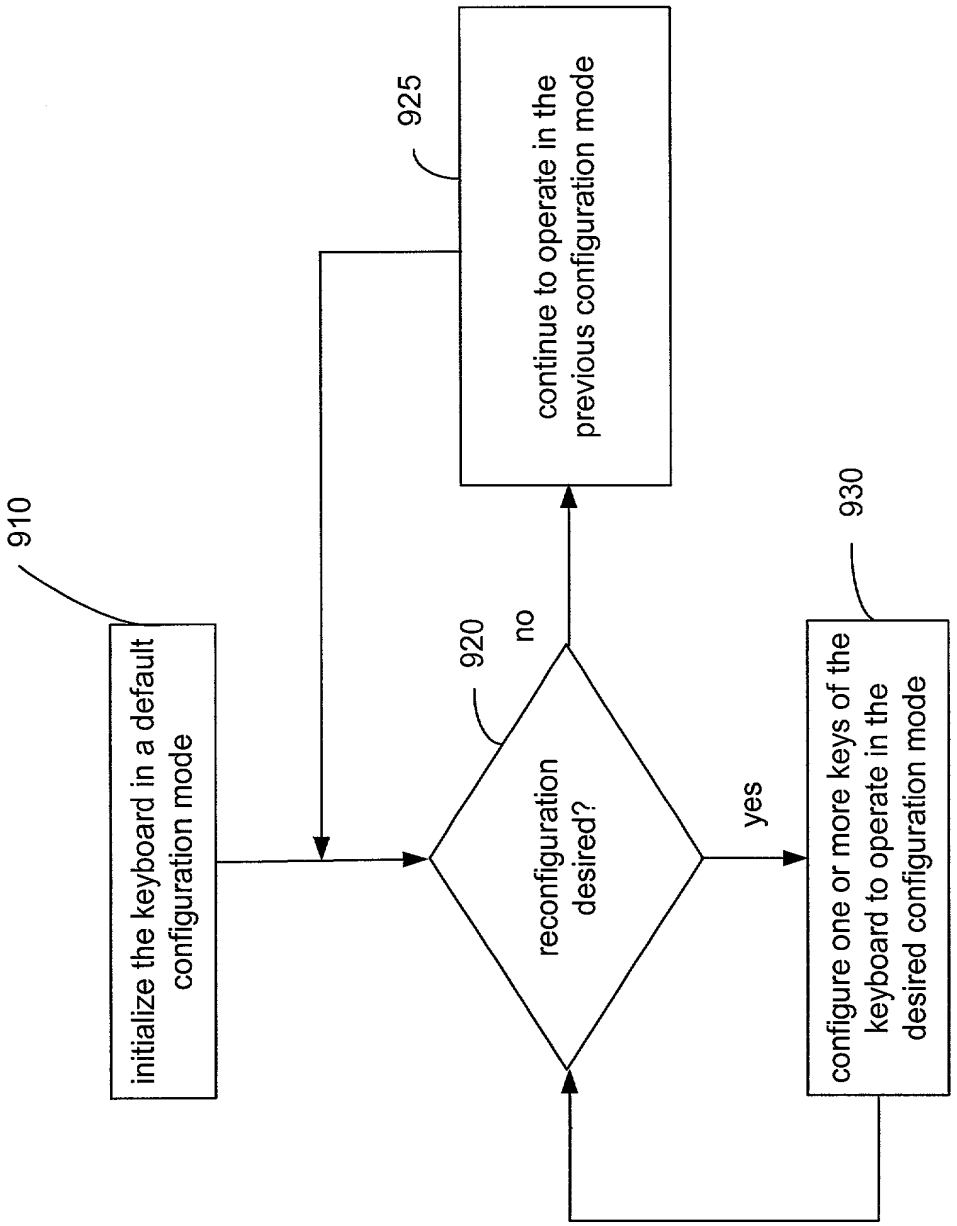
910
initialize the keyboard in a default configuration mode
920
reconfiguration desired?
no
925
continue to operate in the previous configuration mode
yes
930
configure one or more keys of the keyboard to operate in the desired configuration mode

FIGURE 9

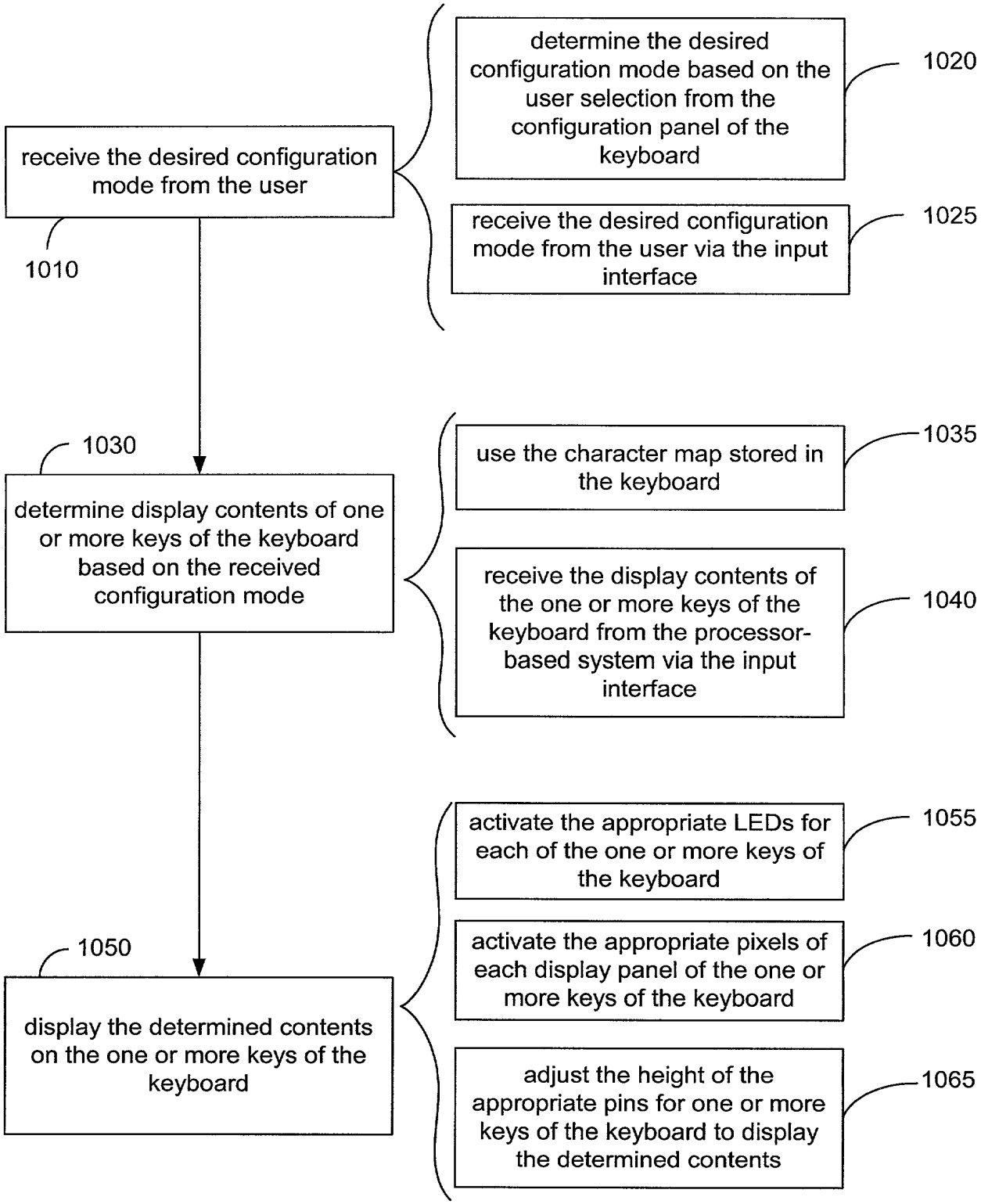
receive the desired configuration mode from the user
1010
determine the desired configuration mode based on the user selection from the configuration panel of the keyboard
1020
receive the desired configuration mode from the user via the input interface
1025
1030
determine display contents of one or more keys of the keyboard based on the received configuration mode
use the character map stored in the keyboard
1035
receive the display contents of the one or more keys of the keyboard from the processor-based system via the input interface
1040
1050
display the determined contents on the one or more keys of the keyboard
activate the appropriate LEDs for each of the one or more keys of the keyboard
1055
activate the appropriate pixels of each display panel of the one or more keys of the keyboard
1060
adjust the height of the appropriate pins for one or more keys of the keyboard to display the determined contents
1065

FIGURE 10

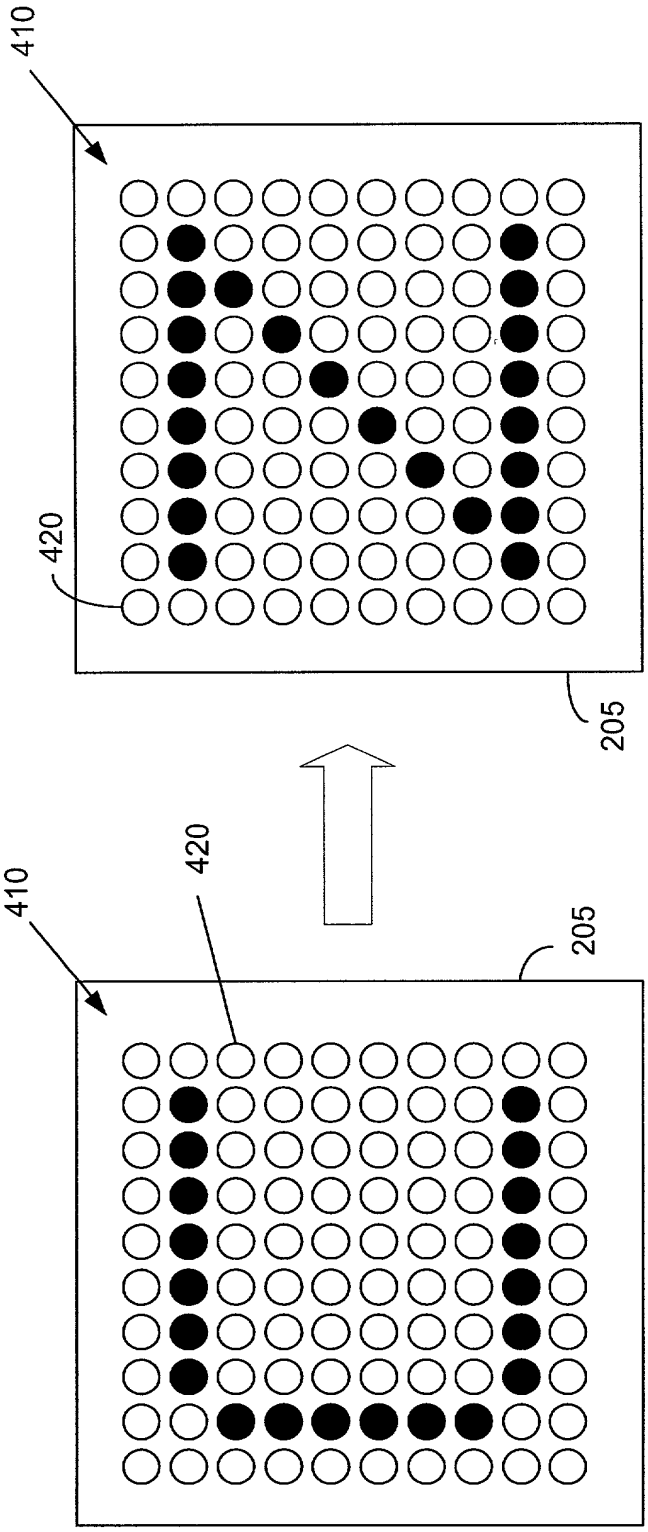

FIGURE 11A

FIGURE 11B

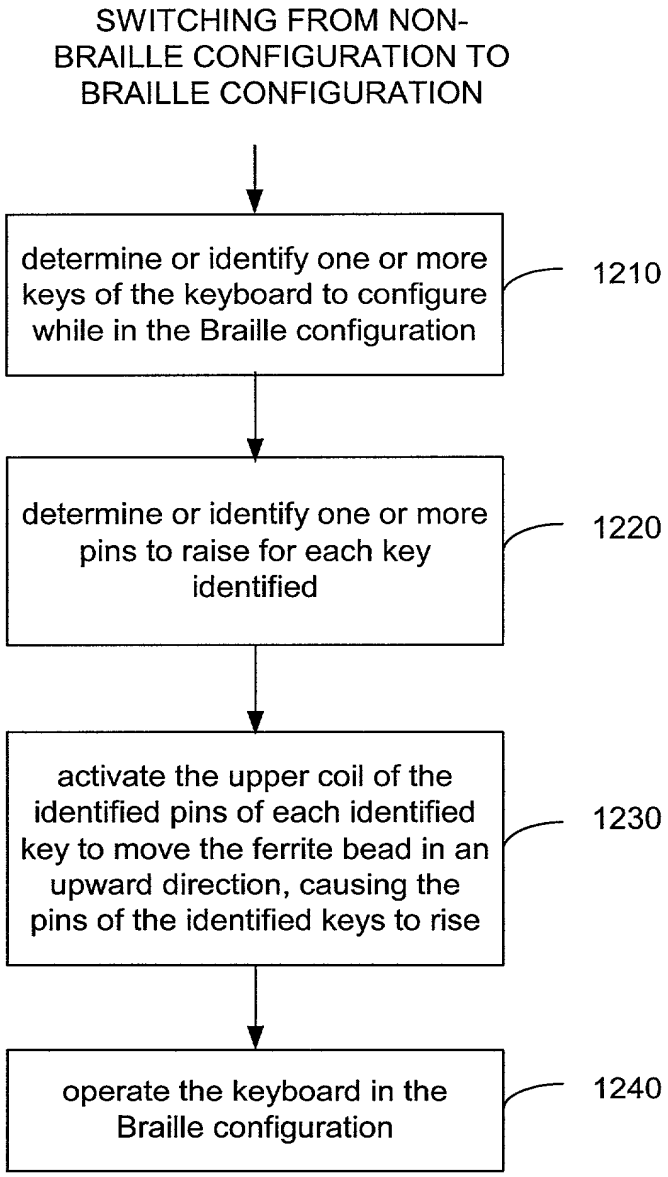
SWITCHING FROM NON-BRAILLE CONFIGURATION TO BRAILLE CONFIGURATION
determine or identify one or more keys of the keyboard to configure while in the Braille configuration
1210
determine or identify one or more pins to raise for each key identified
1220
activate the upper coil of the identified pins of each identified key to move the ferrite bead in an upward direction, causing the pins of the identified keys to rise
1230
operate the keyboard in the Braille configuration
1240

FIGURE 12A

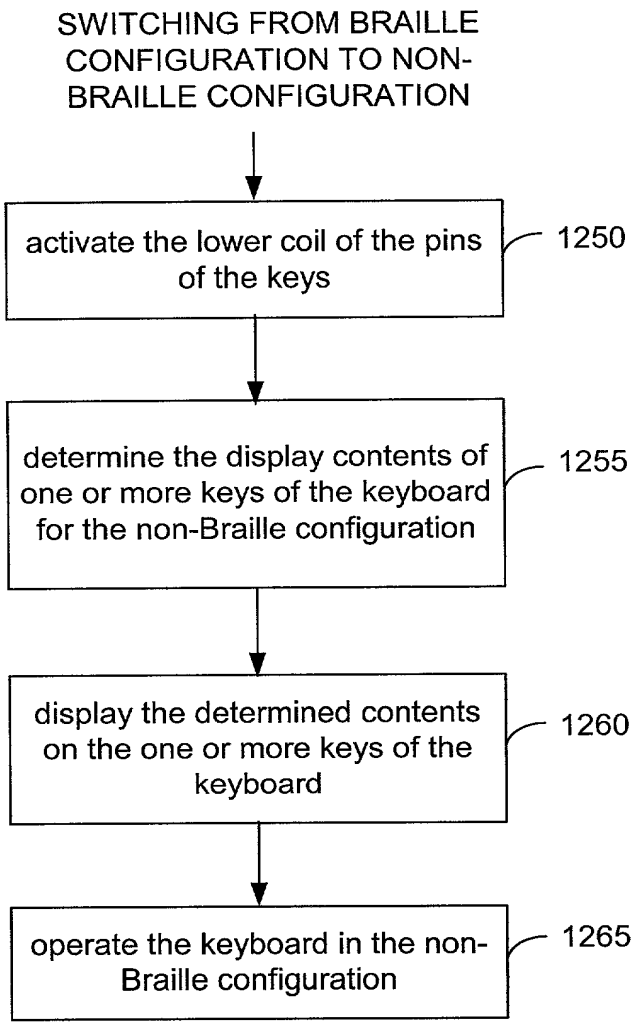
SWITCHING FROM BRAILLE CONFIGURATION TO NON-BRAILLE CONFIGURATION
activate the lower coil of the pins of the keys
1250
determine the display contents of one or more keys of the keyboard for the non-Braille configuration
1255
display the determined contents on the one or more keys of the keyboard
1260
operate the keyboard in the non-Braille configuration
1265

FIGURE 12B